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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,906	08/24/2001	Scott W. Sparrold	004524.P056	3329

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EXAMINER

PAYNE, DAVID C

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,906

Applicant(s)

SPARROLD ET AL

Examiner

David C. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 26-35 is/are rejected.
- 7) ☒ Claim(s) 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/9-16-02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 11-13, 26, 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Bloom et al. US 5,710,652 (Bloom).

Re claims 1, 11, 12, 26 and 30 Bloom disclosed

An apparatus, comprising: a reflective element having a reflective surface (see concaved shaped object under element 62, Fig. 4); and an optical feed capable (col./line: 2/45-65) to receive a light signal (from distant receiver) and mounted to the reflective element, the optical feed positional to direct the light signal onto the reflective surface of the reflective element, the reflective element shaped to reflect the Light signal directed from the optical feed towards a remote Location facing the reflective element (to distant receiver of Fig. 4).

Re claim 13, Bloom disclosed

An apparatus, comprising: a Light emitter (52, 54 of Fig. 4) to emit a Light signal, and a refractive Lens (Fig. 4) assembly configured to receive the Light signal emitted from the light emitter and to refract the Light signal to a remote location facing the refractive lens

assembly (Fig. 4).

Re claim 31, Bloom disclosed receiving the refracted signal with an optical receiver (Fig. 4).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5, 8-10, 14-23, 27-29, and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom et al. US 5,710,652 (Bloom) in view of Clark et al. US 2002/0171896 (Clark).

Re claim 2, Bloom does not disclose wherein the optical feed comprises an optic fiber extending out from the reflective element, the optic fiber having a terminal end, the optic fiber being configured to emit the Light signal from the terminal end and to direct the Light signal emitted from the terminal end onto the reflective surface of the reflective element. Clark disclosed a fiber element-extending out from the reflective/refractive element (see 242 Clark Fig. 7). It would have been obvious to one of ordinary skill in the art at the time of invention to attach the lens element to the fiber in Bloom so as to secure the optics as one

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module. Furthermore, making part integral is not patentable over the prior art.

Re claim 3,

in the modified invention of Bloom and Clark the terminal end of the optic fiber (see Clark 242 of Fig. 7) resides adjacent to a focal plane of the reflective element surface (see Bloom, concaved shaped object under element 62, Fig. 4).

Re claim 4,

in the modified invention of Bloom and Clark the optical feed further comprises an endpoint element coupled to the terminal end of the optic fiber, the endpoint element being capable to beam-form the emitted Light signal (see 104 of Clark Fig. 7).

Re claims 5, 14, 18, 19, 27

in the modified invention of Bloom and Clark does not disclose wherein the optical feed is mounted to the reflective element via a mounting element adjustable about a plurality of axes. It would have been obvious to one of ordinary skill in the art at the time of invention to make the mounting adjustable over a number or axis so that the transceiver could be positioned in any plane.

Re claims 8, 28

in the modified invention of Bloom and Clark wherein the reflective element comprises a concave mirror (see Bloom, see Fig. 4).

Re claims 9, 32-34 Bloom does not disclose

a plurality of optical feeds mounted to the reflective element. Clark disclosed a plurality of optical feeds/receivers (see Clark, 622 of Fig. 19). It would have been obvious to one of ordinary skill in the art at the time of invention to use a plurality of optical feeds in the Bloom invention to carry a greater number of signals to the transceiver or to use multiple paths to the receiver for the same signal.

Re claim 10, the modified invention of Bloom and Clark disclosed a Light source to generate the light signal, the Light source optically coupled to the plurality of optical feeds (Clark, 242 of Fig. 7).

Re claim 15, the modified invention of Bloom and Clark disclosed wherein the Light emitter comprises an optic fiber tip (see 242 of Clark Fig. 7)

Re claims 16, 20, 21 the modified invention of Bloom and Clark disclosed is curved to allow the optic fiber tip to be positioned adjacent to a focal plane of the refractive Lens assembly (see Clark, end of 242 Fig. 7).

Re claim 17, the modified invention of Bloom and Clark disclosed the refractive Lens assembly comprises a fisheye Lens assembly (see Clark, end of 242 Fig. 7).

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Re claim 22, the modified invention of Bloom and Clark disclosed an optical receiver (see Bloom 78, 79 of Fig. 4) coupled to the light emitter (see Bloom, 52, 54 of Fig. 4), the optical receiver capable to receive the light sent from the remote Location.

Re claim 23, the modified invention of Bloom and Clark does not disclose wherein the Light emitter comprises a uniform intensity generator having an input pod optically coupled to receive the Light signal and an output port to emit the light signal, the uniform intensity generator configured to emit the Light signal with a uniform intensity distribution. However, it would have been obvious to one of ordinary skill in the art at the time of invention to use a uniform light distribution so that the receiver has a better probability of receiving light from any orientation.

Re claim 29, Bloom does not disclose generating a plurality of optical signals and reflecting these optical signals emitted from a corresponding plurality of optical feeds towards corresponding optical receivers. Clark disclosed generating multiple optical feeds (see Clark 110, 108 of Fig. 1) to a plurality of receivers (see Clark. 118, 120 of Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of invention to use a plurality of optical feeds in the Bloom invention to carry a greater number of signals to the transceiver or to use multiple paths to the receiver for the same signal.

Re claim 35, the modified invention of Bloom and Clark disclosed a fisheye Lens assembly (see Clark, end of 242 Fig. 7).

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloom et al. US 5,710,652 (Bloom) in view of Clark et al. US 2002/0171896 (Clark) as applied to claim 5 above and in further view of Soto et al. US 6,472,776 B1 (Soto).

Re claim 6, the modified invention of Bloom and Clark as taught above does not disclose the mounting element comprises a fiber positioner having a magnetic fluid cavity, the fiber positioner being capable to adjust a position and an orientation of the optical feed. Soto disclose a magnetic fluid cavity (see Soto, col./line: 16/15-35). It would have been obvious to one of ordinary skill in the art at the time of invention to use the magnetic fluid cavity in the modified invention of Bloom and Clark to allow an element to be rotated between a use position and a stowed position and also to substantially eliminate noise associated with contact of the magnet against the magnet module (see Soto passage above).

Re claim 7, the modified invention of Bloom, Clark and Soto does not disclose wherein the positioner further includes a position sensor system being capable to provide feedback information to the fiber positioner. It would have been obvious to one of ordinary skill in the art at the time of invention to use such a feedback sensor in the modified invention as taught to allow precise, repeatable placement of the fiber positioner.

Allowable Subject Matter

6. Claims 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp

M. R. Sedighian
M.R. SEDIGHIAN
Primary Examiner
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